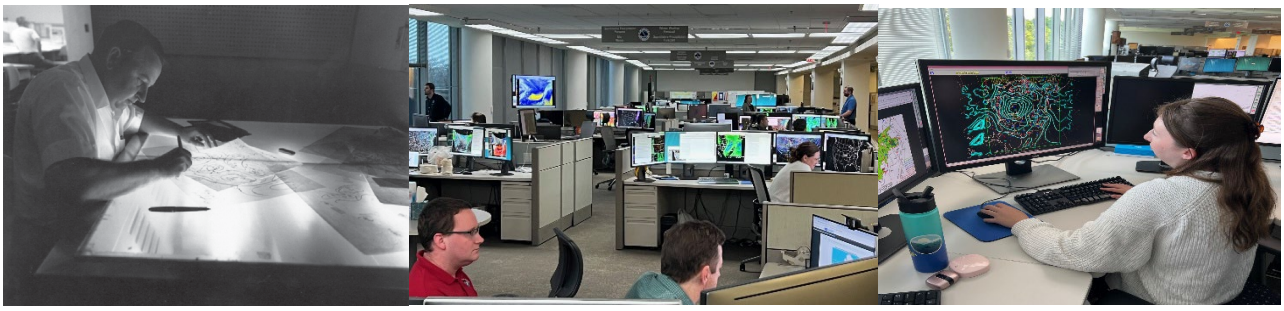
Summary of WPC History and Leadership

September 2025



Mar 1942 Established as the **Weather Bureau Analysis Center**

- Created Mar 5, 1942, by Weather Bureau Circular Letter 39-42; operations began Mar 16, 1942. (This letter did not indicate the creation was a result of Executive Order 8991, "Coordinating Civil Meteorological Facilities and Services for War Purposes", signed by President Franklin D. Roosevelt on Dec 26, 1941.)
- Located in Old Main Building, 24th & M, Northwest, Washington, DC; collocated with the Weather Bureau's Central Office.
- Referred to as "the Analysis Center", although occasionally early on as the **Master Analysis Center**.
- At that time and since 1940 the Weather Bureau was a bureau of the Department of Commerce (DOC).
- Leadership:

1942-1947:	Joseph R. Fulks

Jun 1947 Consolidated into the **Weather Bureau-Air Force-Navy (WBAN) Analysis Center**

- The new organization was created from the Weather Bureau Analysis Center, Air Force Master Analysis Center, and Navy Weather Central.
- Referred to as "the WBAN Analysis Center" and "the Analysis Center".
- WBAN was pronounced AWAY ban@.
- Operations began June 16, 1947, at 2 p.m. EDT.
- Technicality: the U.S. Air Force did not come into existence until Sep 18, 1947.
- Leadership:

1947-1952	Joseph R. Fulks, Chief
Jan 1953-1955	Albert K. Showalter, Meteorologist in Charge

1955 Renamed the **National Weather Analysis Center (NAWAC)**

- Moved to Federal Complex in Suitland, MD, at that time.
- NAWAC was pronounced ANAY wack@ and was part of the Weather Bureau's Central Office.
- Leadership:

1955-1958:	Albert K. Showalter, Chief

Jan 1958 **National Weather Analysis Center (NAWAC)** incorporated with no name change into the National Meteorological Center (NMC) upon NMC's creation.

- Leadership:

1958:	Albert K. Showalter, Chief
1959 – 1961:	Harlan K. Saylor, Chief

Jul 1961 Reorganized into the **Analysis and Forecast Branch** of NMC

- Leadership:

1961 - 1964	Harlan K. Saylor, Chief

1964 Reorganized into the **Analysis and Forecast Division** of NMC

- The reorganization was implemented before or during Sep 1964. The reorganization of the Weather Bureau down to the division level was approval by Dr. Robert M. White, Chief of the Weather Bureau, on Jul 17, 1964.
- In 1965, the Environmental Science Services Administration (ESSA) was created, incorporating the Coast and Geodetic Survey and the Weather Bureau.
- On Oct 3, 1970, the National Oceanic and Atmospheric Administration (NOAA) was created. At that time the Weather Bureau was renamed the National Weather Service and incorporated into NOAA.
- Leadership:

1964 - 1972:	Harlan K. Saylor, Manager

1972 Reorganized into the **Forecast Division** of NMC

- The division moved to the World Weather Building (WWB) on Wednesday, Feb 19, 1975. (According to employee Bill McReynolds the division moved two days after Presidents Day in 1975.)
- Leadership:

1972 - ~1975:	Harlan K. Saylor, Chief
~1975 - 1978:	Edwin B. Fawcett, Chief
Mar 1978 - Apr 1984:	Edward M. Carlstead, Chief

1984 Reorganized into the **Meteorological Operations Division** (MOD) of NMC

- The reorganization was led by Edward M. Carlstead.
- Leadership:

1984 - 1987:	Harlan K. Saylor, Chief (acting)
Jul 1987 - Oct 1988:	Ronald D. McPherson, Chief
Sep 1989 - Apr 1994:	Louis W. Uccellini, Chief
Nov 1994 – Jun 1995:	Ralph A. Petersen, Chief (acting)
Jun 1995 - Sep 1995:	James E. Hoke, Chief

Oct 1995 Reorganized into the **Hydrometeorological Prediction Center** (HPC)

- HPC was created on Oct 1, 1995, from part of MOD upon the reorganization of NMC into the National Centers for Environmental Prediction (NCEP), with the other components of MOD becoming all or part of the Marine Prediction Center (now the Ocean Prediction Center), the Aviation Weather Center, and NCEP Central Operations.

- HPC started continuous operations from the NOAA Center for Weather and Climate Prediction in College Park, MD, on Friday, Aug 17, 2012, at 12 UTC.
- HPC ceased continuous operations at the World Weather Building in Camp Springs, MD, on Sunday, Aug 19, 2012, at 19 UTC.
- Leadership:

Oct 1995 – Mar 2013:	James E. Hoke, Director

Mar 2013 Renamed the **Weather Prediction Center** (WPC)

- HPC was renamed to WPC on Mar 5, 2013, the unit's 71st birthday.
- Among other things, the new name better reflects the Center's diverse mission, provides broader name recognition, is more easily understood and pronounced, and eliminates the confusion of the Center's acronym with the emerging field of High Performance Computing.
- Leadership:

Mar 2013 – May 2013:	James E. Hoke, Director
May 2013 – present:	Kevin C. McCarthy, Director (acting)

Sep 2025 NCEP celebrates 30 years of Service!

-WPC has deep integration with the Weather Enterprise with a deep focus on actionable information, eye-to-eye partner support, and the provision of probabilistic information to support better decisions.

Dec 2014 – present:	David Novak, Director
Feb 2015 – present:	Kathy Gilbert, Deputy Director

A Brief Narrative of NCEP and WPC History

September 2025

The National Centers for Environmental Prediction (NCEP) is a recognized global leader providing a seamless suite of operational environmental analysis, diagnostics and forecasts for a domain that now ranges from the sun to the sea, including weather, ocean, climate, water and space weather prediction services. NCEP's success depends on addressing user needs and the requirements of our world-class employees to enable NCEP to best meet the evolving NOAA mission. Furthermore, NCEP is at the forefront to capitalize and implement emerging scientific and technological advances. In that regard, NCEP must serve as a catalyst to coordinate, cooperate and collaborate through applied research, training, technology transfer and implementation of a common modeling infrastructure for global to regional applications. Partnerships with the entire community, and related operational and developmental test beds, build off collaborations with the NWS, NOAA, other federal agencies, academia and the public sector to power Impact-Based Decision Support (IDSS).

The Weather Prediction Center (WPC) is one of nine centers of NCEP. WPC synthesizes the nation's daily weather story and champions the operational prediction of rain storms, winter storms, and extreme temperature events for the protection of life and property. WPC serves as a center of excellence in quantitative precipitation forecasting, medium- range forecasting (three to eight days), the interpretation of numerical weather prediction models, and in surface analysis. WPC's vision is to be the foundation for impact-based decision support, providing meteorological expertise and service that supports critical decisions.

From the earliest days of the government's involvement in weather services (the NWS may be traced to 1870), it was apparent that a centralized facility would be necessary to gather, organize and disseminate weather data on a national basis effectively. The center during the early years occupied a single room as part of the U. S. Army Signal Service in Washington, D. C. There, telegraphic reports of temperature, wind, and pressure from around the country were plotted and analyzed. From these analyses, rudimentary forecasts were made for the following day. Washington shared some of its forecast duties with the advent of a field office system in the 1890s, but the central office still had the final say in cases of professional dispute.

While WPC's roots lie deep in the past, the organization can be most directly traced to the formation of the Analysis Center by Circular Letter 39-42, signed by Weather Bureau Director Francis W. Reichelderfer on March 5, 1942. Operations began on March 16, 1942, with the unit collocated with the Weather Bureau Central Office at 24th and M Streets NW in Washington, D.C. Initially the unit was sometimes referred to as the Master Analysis Center.

In 1947, the Analysis Center was combined with the Air Force Master Analysis Center and the Navy Weather Central to create the Weather Bureau-Air Force-Navy (WBAN) Analysis Center. Operations commenced on June 16, 1947, at 24th and M Streets NW. The unit was established to coordinate and consolidate national efforts of the civilian and military weather services as they existed at the time. The center produced a wide array of diagnostic and forecast maps for national distribution. Initially, the charts were sent in coded form via teletype. Somewhat later, the installation of facsimile allowed for the direct transmission of graphics. Hundreds of maps were produced every day, including surface and upper air analyses, temperature and precipitation forecasts and prognostic surface charts.

By the early 1950s, computers powerful enough to solve the fundamental equations of atmospheric motion in real-time were at last becoming available. Thus, the theoretical work of English physicist L.F. Richardson, who during World War I first proposed the use of numerical techniques in weather prediction, could finally be tested. The Joint Numerical Weather Prediction Unit (JNWPU) was formed in July 1954 to do just that. More broadly, JNWPU's objective was to apply the expanding field of computer technology to operational weather forecasting.

The JNWPU was staffed and funded jointly by the Weather Bureau, Army, and Navy, and was responsible for many of the early advances in automated analysis and forecasting. The first JNWPU computer, an IBM 701, was installed in March 1955, and the first numerical experimental forecasts (using a barotropic model) appeared one month later. The unit co-located with the renamed National Weather Analysis Center (NAWAC, formerly the WBAN Center), in Suitland, Maryland, during the same year.

The National Meteorological Center (NMC), the direct precursor to NCEP, came into being with the merging of NAWAC (including the Extended Forecast Section) and JNWPU in Federal Office Building #4 (FOB 4) in Suitland in January 1958. NMC at once became the nerve center for weather data in the United States. NMC processed weather observations from around the globe and disseminated analyses and forecasts to customers throughout the U.S. and other countries. Research increased, with emphasis on developing faster and more accurate numerical techniques. It was the only such facility in the world at the time, and at least one publication described its creation as being "a milestone in the progress of meteorology."

Constantly pursuing greater speed and reliability, NMC upgraded its computer investment substantially in the ensuing years, with each new system about 6 times more powerful than the one before. An IBM 704 replaced the 701 in 1957, and an IBM 7090 was installed in 1960. By 1963, the first operational baroclinic model was running on a new IBM 7094. The arrival of a CDC 6600 enabled the first global primitive equation (PE) model run to be made in June 1966.

The accuracy of NMC's numerical guidance continued to increase into the 1970s, but especially significant gains were noted with the introduction of the high resolution PE model on an IBM 360/195 in 1978. By the late 1980s, a Cray Y-MP8 Class VII supercomputer served as NMC's mainframe system. It could produce a numerical forecast for all of North America out to 48 hours in less than 30 seconds, and was some 50,000 times more powerful than the IBM 701. While most NMC functions moved to the World Weather Building at Camp Springs, MD in 1974 and 1975, Suitland's FOB 4 continued to house the Center's main computers until 1999, when an IBM SP was installed at a new site in Bowie, Maryland. This site was changed again in 2002 when a more powerful IBM supercomputer was installed in Gaithersburg, Maryland.

On October 1, 1995, NMC was reorganized and was renamed NCEP. There are nine NCEP centers, with the inaugural names of the seven Service Centers being the Aviation Weather Center, Climate Prediction Center, Hydrometeorological Prediction Center, Marine Prediction Center, Space Environment Center, Storm Prediction Center, and Tropical Prediction Center. The two other centers, the Environmental Modeling Center and NCEP Central Operations, provide the numerical model development and Information Technology infrastructure that are foundational to the Weather Enterprise in the U.S. and around the world. With time the names of several centers were changed with the Marine Prediction Center becoming the Ocean Prediction Center, the Space Environment

Center becoming the Space Weather Prediction Center, and the Tropical Prediction Center becoming the National Hurricane Center.

In August 2012 five NCEP Centers moved into a state-of-the-art facility, the NOAA Center for Weather and Climate Prediction, at the University of Maryland in College Park, Maryland. This move has provided a basis for accelerating product improvements and expanding prediction services for years to come.

On March 5, 2013, the Hydrometeorological Prediction Center (HPC) was renamed the Weather Prediction Center (WPC). The new name better reflects the diverse mission of the organization and provides a clearer and easier-to-understand name for the center. This diverse mission includes quantitative precipitation forecasts, short- and medium-range forecast graphics and discussions, winter weather products, surface analyses and more. NWS Weather Forecast Offices and River Forecast Centers, private sector forecasters, the media, the academic community, and the general public all rely on products produced by the center.

The process of changing the name began as a grassroots effort by the center's employees, and reflected a recommendation made as part of a 2009 external review by the University Corporation for Atmospheric Research, which suggested the center create a new strategic plan and broader name recognition. As part of that process, it became apparent many partners and customers of HPC products were not familiar with the meaning of the term "hydrometeorological," which, among other definitions, relates to the study of the atmospheric and terrestrial phases of the hydrologic cycle, with emphasis on their interrelationship. The abbreviation "HPC" was also frequently confused with that for High Performance Computing. As a historical footnote, it is reiterated the new name was implemented on March 5, despite the fact NOAA Circular 13-02 had a typographical error in the date, announcing the change was to be effective March 3.

During the 2010s, WPC became more deeply integrated into the Weather Enterprise and Emergency Management community. WPC led an expanding media role, launched probabilistic outlooks for extreme rainfall, winter storms, and extreme temperatures, and became a part of the Nation's emergency management framework. Research-to-Operations remained a focus, with the Hydrometeorological Testbed launching the Winter Weather Experiment and the Flash Flood and Intense Rainfall Experiment. These engagements led to the operational adoption of convection-allowing models and associated post-processing to enable better predictions. Numerous intense and historic storms during this period (Sandy, 2016 Blizzard, Harvey, etc.) further highlighted the imperative for accurate, understandable, and timely forecasts.

In March 2020, the global COVID pandemic hit. The Center quickly adapted operations from 95% onsite to 20% onsite over the course of just 20 days. The WPC staff demonstrated unparalleled dedication and resilience, carrying out exceptional service during the historic 2020 Hurricane Season, and 2020-21 Winter Season.

In the 2020s, as the nation experiences historic extreme weather, the Center is transforming to meet the challenge. This includes a deep focus on actionable information, eye-to-eye partner support, and the provision of probabilistic information to support better decisions. In essence, WPC is the foundation for impact-based decision support, providing meteorological expertise and service that supports critical decisions

Seven permanent directors have guided NMC and NCEP since its inception in 1958. George P. Cressman was the Center's first director, a post he held until leaving to become Director of the U. S. Weather Bureau in 1963. Frederick G. Shuman succeeded him and remained until retiring in 1981. William D. Bonner then served as NMC Director until 1990, when Ronald D. McPherson became the director. McPherson served until he retired in July 1998, at which time James E. Hoke became the acting NCEP Director. Louis W. Uccellini became NCEP Director in January 1999 and served until 2013, when Uccellini became the NWS Director in February 2013. Dr. Bill Lapenta served from 2014 – 2019. Dr. Michael Farrar served from 2022-2024.